



# Environmentally Preferable Computers

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## INTRODUCTION

Computers and peripherals often contain toxic materials and are energy intensive. Environmentally preferable purchasing of electronics considers advanced product designs, technology and manufacturing processes that have less impact on the environment, better energy efficiency, longer product life and trade-in or trade-up value. They're also more easily recycled and it is the producer's responsibility to offer proper end-of-life disposition of obsolete equipment.

According to EPA, the [average household owns 24 consumer electronics products](#), which are responsible for 12 percent of household electricity use.

## GUIDELINES AND CERTIFICATIONS

Increasing numbers of organizations are becoming involved in the analysis of environmental attributes of products. Among the proliferating "green" labels in the marketplace are Blue Angel, Nordic Swan, Energy Star, EPEAT and many others. Manufacturers and trade associations are making their own initiatives, as well. For example, Fujitsu Siemens has launched its own "Green IT" label

There are now tools available to help assess energy consumption and other attributes of environmentally preferable products:

### Energy Star

ENERGY STAR is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy that helps save money and protects the environment through energy efficient products and practices. Energy Star covers many product categories, such as electronics, appliances, heating and cooling and lighting, etc, not just computers.



## Energy Star Low Carbon IT Campaign

The EPA has a new “Energy Star Low Carbon IT Campaign,” which is a nationwide effort to assist and recognize organizations for reducing the energy consumed by their information technology equipment. They provide 6 ways to reduce the IT energy costs at your organization. Organizations can increase energy savings further by purchasing Energy Star qualified computers and monitors. When organizations join this campaign, EPA provides free assistance to help implement power management, provides an estimate of the organization's energy and carbon savings, and affords official recognition from the agency.

## Electronic Product Environmental Assessment Tool (EPEAT)

Electronic Product Environmental Assessment Tool (EPEAT) is a procurement tool to help institutional purchasers in the public and private sectors evaluate, compare and select desktop computers, notebooks and monitors based on their environmental attributes. EPEAT also provides performance criteria for the design of products, and provides an opportunity for recognition for a manufacturer's efforts to reduce the environmental impact of its products.



There are 23 required criteria and 29 optional criteria. They are divided into the following eight categories:

- Reduction/Elimination of Environmentally Sensitive Materials (3 required; 8 optional)
- Material Selection (3 required; 3 optional)
- Design for End of Life (6 required; 5 optional)
- Product Longevity/ Life Extension (2 required; 2 optional)
- Energy Conservation (1 required; 3 optional)
- End of Life Management (2 required; 1 optional)
- Corporate Performance (3 required; 2 optional)
- Packaging (3 required; 4 optional)

EPEAT identifies EPEAT registered products in one of three environmental performance tiers -- Bronze, Silver or Gold.

- Bronze: Product meets all 23 required criteria
- Silver: Product meets all 23 required criteria plus at least 14 optional criteria.
- Gold: Product meets all 23 required criteria plus at least 21 optional criteria.

## Electronics Environmental Benefits Calculator

The Electronics Environmental Benefits Calculator (EEBC) was developed to assist organizations in estimating the environmental benefits of greening their purchase, use and disposal of electronics. This calculator estimates the environmental and economic benefits of purchasing EPEAT-registered products, in addition to improvements in equipment operation and end-of-life management practices

## UL Environment/ EcoLogo

UL is a global independent safety science company with more than a century of expertise innovating safety solutions from the public adoption of electricity to new breakthroughs in sustainability, renewable energy and nanotechnology. UL has ECOLOGO Certified products, services and packaging are certified for reduced environmental impact. ECOLOGO Certifications are voluntary, multi-attribute, lifecycle based environmental certifications that indicate a product has undergone rigorous scientific testing, exhaustive auditing, or both, to prove its compliance with stringent, third-party, environmental performance standards

## Nordic Swan

Nordic Ecolabelling is a voluntary license system where the applicant agrees to follow certain environmental and health criteria

## Blue Angel

The Blue Angel (Blauer Engel) is a German certification for products and services that have environmentally preferable aspects.

## TCO Development

TCO labelling is an international company that certifies products to be environmentally preferable.

## Green IT

This is a self-certification of products from Fujitsu-Siemens. They base some of their product points on Energy Star, TCO and other labels.

## Verdium

Computer software that places PCs into lower power settings when not in use. This helps reduce CO2 emissions by reducing PC energy consumption. There is a program for home use and a networked software program called "Surveyor." The program will help quantify savings and payback periods.

## 80 Plus

80 PLUS is an electric utility-funded incentive program to integrate more energy-efficient power supplies into desktop computers and servers. Participating utilities and energy efficiency organizations across North America have contributed over \$5 million in incentives to help the computer industry transition to 80 PLUS certified power supplies.

Sample Procurement spec/guideline:

### *Energy-Efficient Power Supplies*

Preference will be given to bids that include 80 PLUS® certified power supplies in desktop computers, and servers with non-redundant power supplies (desktop-derived and 1u).

## USAGE HISTORY AND EXPERIENCE

The County has a policy to encourage agencies to buy EPEAT® compliant products. The [Electronic Products Environmental Assessment Tool](#), or EPEAT®, is an environmental procurement tool sponsored by the Environmental Protection Agency (EPA) and managed by the Green Electronics Council to evaluate, compare and select desktop computers, laptops, work stations and monitors based on their environmental attributes.

King County primarily purchases EPEAT® registered laptops, desktops, monitors and workstations meeting the EPEAT® gold or silver ratings.

## BID AND CONTRACT LANGUAGE

King County adopted Executive Policy "[Empowering Development and Implementation of Strategies for E-Waste Reduction](#)" in 2007 that encourages agencies to purchase environmentally preferable computers with a certification such as EPEAT.

King County uses the State of Washington contract awarded to Dell and HP for most of its computer equipment. For small purchases, the county uses the following language:

### **Bid Language**

#### **One Time Buy**

All desktops, laptops, computer monitors and other electronic equipment eligible for registration under the Electronic Products Environmental Assessment Tool (EPEAT) program, are required to have achieved Bronze registration or higher. The registration criteria and a list of all registered equipment are provided at <http://www.epeat.net>. All equipment offered must be registered at the time bids are due.

## Reporting

Contractors are required to provide quarterly reports quantifying the EPEAT registered and unregistered products purchased under this contract. The report, in a format acceptable to King County, shall identify the detail required by King County, which may include but is not limited to, type of product, quantity of product purchased, whether it is registered or unregistered and at what level it is registered with EPEAT.

### DRAFT language from EPEAT

#### Recommended Contract Language

- The policy language below is excerpted from actual organizational policies— it provides a useful model that can be customized to suit the particular needs and contracting approaches of your organization:
- A. General. PURCHASERS must ensure that they meet at least 95 percent of their annual acquisition requirement for electronic products with EPEAT-registered electronic products, unless there is no EPEAT standard for such products.
- B. Personal computer products.

Personal computer products is a category of EPEAT-registered electronic products.

  - a. The IEEE 1680 standard for personal computer products—
    - i. (i) Was issued by the Institute of Electrical and Electronics Engineers on April 28, 2006;
    - ii. (ii) Is a voluntary consensus standard;
    - iii. (iii) Meets US EPA guidance on environmentally preferable products and services; and
    - iv. (iv) Is described in more detail at <http://www.epeat.net>.
  - b. A list of EPEAT-registered products that meet the IEEE 1680 standard can be found at <http://www.epeat.net>.
  - c. The IEEE 1680 standard sets forth required and optional criteria. EPEAT “Bronze” registered products must meet all required criteria. EPEAT “Silver” registered products meet all required criteria and 50 percent of the optional criteria. EPEAT “Gold” registered products meet all required criteria and 75 percent of the optional criteria. These levels are discussed at [www.epeat.net](http://www.epeat.net).
- C. This policy makes EPEAT Bronze registration the minimum standard that all IT hardware purchased by ORGANIZATION must meet. Purchasers are encouraged to make EPEAT Silver registration the required standard for IT hardware in specific purchase contracts, where sufficient products are available from multiple suppliers, with Gold registered products preferred.
- D. PURCHASERS/DEPARTMENTS shall establish procedures for granting any necessary exceptions to the requirement in paragraph (a) of this section, with the goal that the dollar value of exceptions granted will not exceed 5 percent of the total dollar value of electronic products acquired by the Agency/Department, for which EPEAT-registered products are available. For example, agencies may grant an exception if the agency determines that no EPEAT registered product meets agency requirements, or that the EPEAT registered product will not be cost effective over the life of the product.

## E. Draft Reporting document from EPEAT

	Unregistered		EPEAT Bronze		EPEAT Silver		EPEAT Gold		Total	
	No. of products	\$ Spent	No. of products	\$ Spent	No. of products	\$ Spent	No. of products	\$ Spent	No. of products	\$ Spent
Desktop Computer Units										
Laptops / notebooks										
Monitors (LCD)										
Monitors (CRT)										
Total										

## RECYCLING INFORMATION

### King County

King County recycles obsolete electronics equipment through a local recycler using the State of Washington Contract #00615: [Recycling Services-Electronics & Spent Light](#). Please see the [Electronics Recycling](#) page for more information.

### State of Washington

The State of Washington implemented a free electronics recycling plan in 2009. Money from manufacturer's have been set aside to pay for the recycling of computers, monitors, laptops and televisions from residents and small businesses. There is no charge for consumers.

- [FREE E-Cycle Washington State Electronics Recycling](#)

## FOR MORE INFORMATION

[Green Print](#)

## VENDOR INFORMATION

King County's Current Contract Vendors:

- [Dell and Hewlett-Packard](#) King County CPA#5521750 (Based on [State of Washington contract #05815](#))